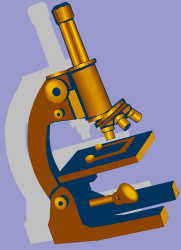


# Featured Research Studies



## Environmental Exposure Assessment, Pollution Sources, and Exposure Agents:

### A Primer for Pediatric Nursing Professionals

Derek G. Shendell, D.Env, MPH; Ann Pike-Paris, MS, RN  
 Pediatr Nurs. 2007;33(2):179-182. ©2007 Jannetti Publications, Inc.

Medscape Public Health & Prevention

#### Abstract and Introduction

Children's environmental health is a growing, interdisciplinary field of diverse professionals and community members working together in policy advocacy, research, health, and environmental interventions and treatment services. Understanding exposure assessment is central to improving children's health across age, gender, indicators of socioeconomic status, and racial/ethnic groups. In general, children are more susceptible and vulnerable to adverse acute and chronic effects due to acute and chronic exposures to environmental toxicants since they eat more food, drink more fluids, and breathe in more air per unit of body weight than adults; their behaviors and rapid developmental changes also contribute to their risks. By enhancing knowledge and awareness of the basic concepts of human exposure assessment and key details of sources of environmental pollution, pediatric nursing professionals can enhance their practices — clinical and patient education skills — and thus improve daily work in their communities through the promotion of exposure reduction or prevention measures.

<http://www.medscape.com/viewarticle/558800?src=mp>

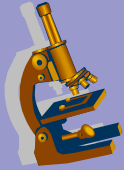
World J Biol Psychiatry. 2007 May 8;:1-7 [Epub ahead of print] PMID: 17853290

#### Neuroaetiology of chronic fatigue syndrome: An overview.

Sanders P, Korf J. University Centre of Psychiatry, University of Groningen, Groningen, The Netherlands.

Chronic fatigue syndrome (CFS) is now recognized as a medial disorder. In contrast to recent related reports, the present review focuses primarily on aetiological aspects of CFS. Four major hypotheses are reviewed. (1) Although CFS is often associated with viral infection, the presence of viruses has as yet not consistently been detected. (2) It is not clear whether anomalies of the HPA axis often observed in CFS, are cause or the consequences of the disorder. (3) Immune dysfunction as the cause of CFS is thus far the weakest hypothesis. (4) The psychiatric and psychosocial hypothesis denies the existence of CFS as a disease entity. Accordingly, the fatigue symptoms are assumed to be the consequence of other (somatic) diseases. Other possible causes of CFS are oxidative stress and genetic predisposition. In CFS cognitive behavioural therapy is most commonly used. This therapy, however, appears to be ineffective in many patients. The suggested causes of CFS and the divergent reactions to therapy may be explained by the lack of recognition of subgroups. Identification of subtypes may lead to more effective therapeutic interventions.

[http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=17853290&itool=iconabstr&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17853290&itool=iconabstr&itool=pubmed_DocSum)



Semin Perinatol. 2007 Aug;31(4):240-242.

### **Environmental Factors Implicated in the Causation of Adverse Pregnancy Outcome.**

Triche EW, Hossain N.

Yale Women & Children's Center for Blood Disorders, Yale University School of Medicine, New Haven, CT.

Adverse pregnancy outcome from environmental factors may include congenital anomalies, increased risk for miscarriage, preterm delivery, intrauterine growth restriction, and still birth. Apart from adverse pregnancy outcome, there may be effects on the other reproductive functions, like menstrual disorders and infertility. Environmental factors which have been implicated in adverse pregnancy outcome include smoking, video display terminals, anesthetic gases, antineoplastic drugs, and exposure to lead, selenium, and inorganic mercury. Among these, cigarette smoking during pregnancy has been the leading environmental factor for adverse pregnancy outcome. Cigarette smoking during pregnancy continues to be a significant public health concern. Maternal smoking during pregnancy has been associated with low birth weight (<2500 g). Mothers who smoke during pregnancy are twice as likely to give birth to low-birth weight infants. Similarly, air pollution, pesticide exposure, and stress have also been associated with low birth weight and preterm delivery. This review gives an overview of the importance of environmental factors in adverse pregnancy outcome.

PMID: 17825680 [PubMed - as supplied by publisher]

[http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=17825680&itool=iconabstr&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17825680&itool=iconabstr&itool=pubmed_DocSum)

Cien Saude Colet. 2007 Mar;12(1):115-130.

### **[Multiple exposure to pesticides and impacts on health: a cross-section study of 102 rural workers, Nova Friburgo, Rio de Janeiro State, Brazil.]**

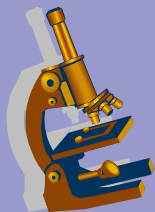
[Article in Portuguese]

Araújo AJ, Lima JS, Moreira JC, Jacob SD, Soares MD, Monteiro MC, Amaral AM, Kubota A, Meyer A, Cosenza CA, Neves CD, Markowitz S.

NETT, IDT, HUCFF, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, 21941-913. A cross section study was carried out in a farming community from Nova Friburgo, Rio de Janeiro state, Brazil, to examine epidemiological, clinical and laboratory aspects of multiple exposure to pesticides in a representative sample of 102 small farmers. Both males and females were submitted to an extensive protocol which included an occupation questionnaire, biological sample collection for toxicology analysis and clinical - general and neurological - evaluation. The toxicology test results showed light to moderate episodes of acute intoxication by organophosphorates either described by the farmers or observed during clinical examination. Thirteen cases of delayed neuropathies (12,8%) as well as 29 cases of neural behavioral syndromes and psychiatric disorders associated to the continued use of pesticides were diagnosed. These results indicate recurrent multiple overexposures to high concentrations of different chemicals, with serious damage to vital functions, especially considering their young age (average 35 ± 11 years old) and the productive period in their lifetime. These results show how important it is to monitor multiple exposure to pesticides - a chain of events that may have major impacts on public health and the environment.

PMID: 17680063 [PubMed - as supplied by publisher]

[http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=17680063&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17680063&itool=pubmed_DocSum)



R. Thier, K. Golka, Th. Brüning, H. M. Bolt.

**[Genetic Susceptibility in view of toxic workplace charges and environmental impacts.]**

Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz. 1999  
Nov;42:11;834-840.

**Abstract**

The variability of genes coding for xenobiotic metabolizing enzymes is an important reason for individual variations in susceptibilities towards chemical toxicants. In environmental and occupational medicine, polymorphisms of different isoforms of cytochrome P450, of N-acetyl-transferase (NAT2) and of glutathione transferase (GSTT1, GSTM1) are now of importance. In particular, the cytochrome P450 isoenzyme CYP2E1 is a key enzyme of the oxidative metabolism of highly relevant industrial chemicals as it metabolizes alkenes as well as aromatic and halogenated hydrocarbons. The influence of N-acetyltransferase 2 (NAT2) on the carcinogenic effect of aromatic amines upon the urothelium has been well established; the N-oxidation of aromatic amines leading to toxic and carcinogenic intermediates is higher in "slow" compared to "rapid" acetylators. In general, it is now evident that polymorphisms of xenobiotic metabolizing enzymes may have a decisive role in modulating the effects of toxicants on humans. Further progress in this field is to be expected, and calls for intensive discussion of both the preventiv and sociopolitical aspects.

Schlüsselwörter Fremdstoffmetabolismus · Polymorphismus · Cytochrom P450 · Glutathiontransferase (GST) · N-Acetyltransferase (NAT2)

<http://www.springerlink.com/content/2atpwd9t9t8kcp9a/>

We seek to provide information and resources for those suffering with Multiple Chemical Sensitivities and other toxic injury in the United States. This information is for informational purposes and is not intended to replace the examination, diagnosis and treatment of a licensed physician and no such claims are inferred. Articles are not necessarily the opinion of MCS America and printing of other's opinions does not constitute endorsement. Neither MCS-America, Lourdes Salvador, nor any members of MCS-America will be responsible for misuse of this information.

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**Editors for this issue are:**

Lourdes "Sal" Salvador



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